rally remains intact; and in these cases enucleation, being attended with complete success, should never be neglected.

3. The slightest form of the affection may be appropriately termed a *sympathetic neurosis.* It is characterized by considerable photophobia with consecutive spasm of the orbicularis, slight injection around the cornea, weeping, a want of energy in vision, and defective power of accommodation. Enucleation would here be also a remedy; but the author, acting on the suggestion of Von Graefe, has, in three instances which have come under his notice, resorted with complete success to the section of the ciliary nerves; and he recommends that this operation should be performed when, from the sensibility of the ciliary region to the touch, sympathetic ophthalmia is to be apprehended; practising it indeed before any symptom of the sympathetic affection has appeared.—*Brit. and For. Med.-Chir. Rev.*, April, 1868, from *Annales d' Oculistique,* Sept. 1867.

---

43. *Von Graefe's New Modified Linear Extraction.*—From a careful consideration of the advantages and disadvantages attending the scoop extraction of cataracts, as first recommended by Waldau and subsequently modified by Bowman and Critchett, Professor Von Graefe was led to devise a method of operating which would preserve all the benefit of iridectomy and a linear incision, and avoid, as far as possible, the evils that accrue from the necessity of introducing instruments into the eye to assist the evolution of the lens.

The result of his deliberations was the introduction of this new operation.

The instruments required are—

1st. A long, narrow knife, not unlike a fine tenotomy knife. The blade should be rather above an inch in length, and not exceed one-tenth of an inch in breadth. To give firmness to the blade, the surfaces should be pretty convex. 2d. An ordinary cystitome, to lacerate the capsule. 3d. A pair of iris forceps. 4th. A pair of curved scissors. 5th. A blunt hook, with its stem bent at an obtuse angle at about a quarter of an inch from its extremity; this bending of the stem is to facilitate the introduction of the hook through an incision at the upper part of the eye. 6th. A pair of toothed forceps. 7th. A wire speculum.

The patient being placed on a couch, and the lids fixed by means of the speculum, the surgeon pinches up a fold of conjunctiva close to the inferior margin of the cornea, with the toothed forceps, and draws the eyeballs downwards, and proceeds to the

First stage of the operation—the incision. The narrow knife, with its cutting edge upwards, should be introduced through the junction of the sclerotic and cornea at a point half a line from the margin of the cornea, and as much below the tangent of its vertex. The point of the knife should first be directed downwards and inwards until it reaches the centre of the pupil, the handle is then to be depressed and the point directed upwards and inwards to a spot in the corneo-sclerotic junction corresponding to the point of entrance, where counterpuncture is to be made. As soon as the point of the knife has penetrated, the edge of the blade should be directed forwards, and the incision completed by cutting straight out with a slight sawing motion.

A portion of conjunctiva is the last tissue to be divided, and forms a flap, which covers the site of the incision in the corneo-sclerotic junction.

The second stage of the operation consists in the excision of a portion of iris. Generally a portion of iris prolapses as soon as the incision is completed, which is to be seized with a pair of iris forceps and excised with the scissors, care being taken that the conjunctival flap is not cut away, and that no portion of iris is left between the lips of the wound. When the iris does not prolapse through the wound, the forceps must be introduced, a portion of iris drawn out and excised.

The third stage of the operation is the laceration of the capsule, which is effected as in the ordinary flap extraction. The laceration should be very free, and extend to the periphery of the lens, especially above.

The fourth stage—the evacuation of the lens. This is to be accomplished by drawing the eye freely downwards with the forceps, and applying the back of the curette with gentle pressure to the sclerotic margin of the incision, so as to make the wound gape. To assist the evacuation of the lens, gentle counterpressure may be made with the forceps below; while the curette should be made to glide along the sclerotic margin of the incision with gradually increasing pressure ("slide manœuvre"). As the nucleus of the lens presents itself at the incision the pressure is to be relaxed, and the evacuation may be completed by applying the curette to the edge of the nucleus. If, however, the nucleus is of such size as not to pass through the incision without having recourse to a dangerous amount of pressure, its evolution must be assisted by traction with the blunt hook, which is to be inserted through the incision, passed along the posterior surface of the lens, and its extremity hooked below the lower edge of the nucleus.

Prof. Von G. in a subsequent supplementary note states that he *now* effects the evolution of the lens by pressure exerted in a manner essentially the same as in ordinary flap extraction. He applies a spoon to the lower half of the cornea and exerts a gentle pressure in the direction of the centre of the eye, followed by short pushing movements from below upwards. He does not object to the slide manœuvre being employed in the first instance to secure the presentation of the margin of the lens, but considers that after this is effected the slide manœuvre contributes merely to increase the intra-ocular pressure without having any special bearing upon the line of emergence of the cataract.

The fifth stage of the operation consists in the clearing of the pupil from any fragments of lens that may remain by friction exerted through the lids, in clearing the lips of the wound from any intervening iris tissue or blood-clot, and in adjusting the conjunctival flap.

The after-treatment is simple; the hollows of the orbit are to be filled with cotton-wool, and an elastic bandage applied, which may be changed twice a day. Rest is recommended, but is not so imperatively necessary as after flap extraction. The patient may even get up the second day after the operation. No change of diet is necessary, beyond the avoidance of stimulants and such articles as require mastication. From the second day atropia is to be applied twice daily, to prevent adhesion between the cut extremities of the iris and the capsule of the lens; this application, however, is deferred where there is copious conjunctival secretion.

Prolapse of vitreous is the chief evil to be feared in the performance of the operation; and Von Graefe is of opinion that though too peripheral an incision, too great pressure exerted to effect the evolution of the lens, etc., may have partly caused the prolapse of vitreous, still that strong muscular straining contractions on the part of the patient are the chief factor in the production of this complication. Anæsthesia, of course, may thoroughly neutralize muscular action, but Von Graefe has some difficulty in having general recourse to chloroform, from a certain amount of danger to life that attends the induction of complete narcotism.

The advantages claimed by Von Graefe for this operation are, 1st. That the incision is linear, as the consequence of which the coaptation of the edges of wound is more perfect than is the case after a flap incision, and there is less risk of gaping of the wound, permitting loss of vitreous, *after* the performance of the operation; 2d. That it is peripheral, passing chiefly through a vascular texture in which the healing process occurs more rapidly than in a non-vascular tissue; 3d. That the incision may be viewed as subconjunctival, being covered by a flap of conjunctiva; 4th. That a portion of iris is removed, and thus no prolapse of iris can occur, and the tendency to iritic inflammation is diminished; 5th. That in most cases no instrument is introduced to assist the evolution of the lens, and, when such is necessary, a hook merely is employed; and 6th. That the after-treatment is of short duration.

Prof. Von G. claims to have operated by this method within one year upon three hundred cases, with a perfect result by one operation on ninety per cent. These cases included cataracts of various forms without selection, some immature and some complicated with conjunctivitis, granular lids, affections of lachrymal passages, staphyloma posticum, chronic iritis, etc.—*Edinburgh Medical Journ.*, Sept. 1868, from *Archiv für Ophthalmologie*, xi. band, 3 abth, 1865, and xii. band, 1 abth, 1866.

[We must observe, with due respect to the high authority of Prof. Von G.

that we cannot conceive of any circumstances which would justify an operation for cataract in patients suffering from conjunctivitis, granular lids, or chronic iritis.—Editor.]

MIDWIFERY.

44. *Case of Twins at different Stages of Development expelled at the same time.*—Dr. Atchison communicated to the Obstetrical Society of Edinburgh a case of this which he supposed to be an instance of superfœtation. The subject of the case was a well-formed woman aged 30, who had been born and brought up in India, had borne two children at full period of gestation ; and then followed two miscarriages ; lately been suffering a good deal from fever ; her general health not good at present ; system much relaxed from debility, caused chiefly by the prevalent great heat of the season. On examination, I found that after a short and easy labour the child was born, and the placenta discharged. The uterus was fairly contracted. On examining the child, found it to be a case of premature birth at the seventh month, which corresponded with the mother's statements. The child did not survive over a few hours.

I then examined the placenta, to which, much to my astonishment, was attached a large sac. This, on closer inspection, proved to be another set of membranes in an entire state, containing another fœtus. The placenta of this last being incorporated into that of the first-born fœtus, much smaller, but with a distinct mark of union still existing. At one point the membranes of both the fœti were inseparably united, and those of the smaller fœtus were much more dense in structure, and less transparent than those of the larger fœtus.

The fœtus contained in the sac (which was not opened) seemed from its size and development to have completed nearly its fourth month of utero-gestation.

On cross-questioning the mother a few days after, relative to what she considered as having been the cause of having produced the premature labour, she stated that for about ten days before the birth of the child, she had been suffering from motions resembling those of the child in utero, but higher up in her abdomen, and which were accompanied by pain, and, at the same time, that these movements caused the movements of the (first) child to come on with violence. That position relieved her, and only upon first lying down did they come on ; that gradually the motion in the upper part of the abdomen got worse, and to the combined motion and pain she attributed the miscarriage. It must be here remembered that, up to this time (1868), the mother does not know of the second fœtus.

Therefore I would beg to ask the opinion of the Society whether they would consider the *quickening* of the second fœtus to have been the cause of this premature labour, taking into consideration the relaxed condition and general unhealthy state of the mother, the advanced state of the fœtus first expelled, and the apparent previous liability of the mother to premature confinement.

Supposing the case to have been one of twins, where one fœtus was less developed than the other, might not the want of room for further development have created an excess of motion in the smaller child, and again thus have led to a like result, viz., premature labour. But I myself consider the case to have been one where one ovum was impregnated previous to the other, and therefore of true superfœtation.

Dr. Wilson was inclined to think that the case just related was one of twins, in which one of the children had died, and not a case of superfœtation. He thought that the account of the second fœtus was defective.

Dr. Keiller took the same view of the case. Many cases of a similar kind had been recorded. It often happened that one child died in utero, and was retained, while the other went on to the full time. When the liquor amnii is retained, the dead child may be kept in perfect preservation for a very long time. He had a number of preparations illustrative of blighted twin cases in his museum.